

## **AMENDMENTS TO THE CLAIMS**

1. **(Currently Amended)** A recording/reproduction method by which data is read from a first recording medium containing first MPEG data which is divided taking a given data unit as one data group, and a recording/reproduction process for the read data is carried out, said recording/reproduction method comprising:

    a reading step of reading the first MPEG data from the first recording medium;

    an information obtaining step of obtaining positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

    an information addition step of adding the positional information at a determined position in the first MPEG data to generate second MPEG data; and

    a recording step of recording the second MPEG data on a second recording medium,

wherein in the reading step, the first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed, and

wherein in the recording step, the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

### 2-11. **(Cancelled)**

12. **(Currently Amended)** A recording/reproduction method by which MPEG data that is obtained by coding a video signal by an MPEG coding system and is divided taking a given data unit as one data group is recorded/reproduced, said recording/reproduction method comprising:

    a storage step of storing first MPEG data corresponding to one or more data groups in a data storage unit;

    a reading step of reading the first MPEG data from the data storage unit;

    an information obtaining step of obtaining positional information which indicates

positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to the specific data group, on the basis of the first MPEG data;

an information addition step of adding the positional information at a determined position in the first MPEG data, to generate second MPEG data; and

a recording step of recording the second MPEG data on a second recording medium,  
wherein in the reading step, the first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed,  
and

wherein in the recording step, the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

13. **(Currently Amended)** The recording/reproduction method of Claim 1, further comprising including:

a coding step of coding a video signal by an MPEG coding system to create video data and simultaneously coding an audio signal to create audio data;

a multiplexing step of multiplexing the audio data and the video data to generate the first MPEG data; and

a preprocessing recording step of recording the first MPEG data on the first recording medium.

14. **(Currently Amended)** The recording/reproduction method of Claim 1, wherein in the information addition step, the positional information indicating the positions of the previous and subsequent data groups of the specific data group with respect to said specific data group is added in the vicinity of the head of said specific data group.

15-17. **(Cancelled)**

18. **(Currently Amended)** The recording/reproduction method of Claim 1, wherein

the MPEG data is coded data which conforms to any of MPEG1, MPEG2, MPEG4, and MPEG7 standards.

19. **(Currently Amended)** The recording/reproduction method of Claim 1, wherein the first and second MPEG data are transport streams or program streams.

20. **(Currently Amended)** The recording/reproduction method of Claim 1, wherein the data group is composed of one or plural GOPs each being an access unit at reproduction.

21. **(Currently Amended)** The recording/reproduction method of Claim 1, wherein the first and second recording media are any of a hard disk, an optical disk, a magneto-optical disk, a semiconductor memory, and a magnetic tape.

22. **(Canceled)**

23. **(Currently Amended)** A recording/reproduction apparatus which read data from a first recording medium containing first MPEG data which is divided taking a given data unit as one data group, and carries out a recording/reproduction process for the read data, said recording/reproduction apparatus comprising:

a reading unit for reading the first MPEG data from the first recording medium;  
an information obtaining unit for obtaining positional information which indicates positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

an information addition unit for adding the positional information at a determined position in the first MPEG data, to generate second MPEG data; and

a recording unit for recording the second MPEG data on a second recording medium,  
wherein the first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed, and

wherein the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

24-25. (Cancelled)

26. (Currently Amended) A recording/reproduction apparatus which records/reproduces MPEG data that is obtained by coding a video signal by an MPEG coding system, said recording/reproduction apparatus comprising:

a memory unit for storing first MPEG data corresponding to one or more data groups;  
a reading unit for reading the first MPEG data from the memory unit;  
an information obtaining unit for obtaining positional information which indicates positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

an information addition unit for adding the positional information at a determined position in the first MPEG data, to generate second MPEG data; and

a recording unit for recording the second MPEG data on a second recording medium,  
wherein first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed, and

wherein the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

27. (Currently Amended) A recording medium which contains second MPEG data generated by the recording/reproduction method of Claim 1, wherein

the second MPEG data is divided taking a given data unit as one data group, and has a data structure including positional information which indicates positions of previous and subsequent data groups of a specific data group with respect to said specific data group.

28. **(Currently Amended)** A personal computer which implements a data processing, by executing software embodied on a computer-readable medium, for reading data from a first recording medium containing first MPEG data which is divided taking a given data unit as one data group, and recording/reproducing the read data, wherein

    said data processing includes:

        a reading process for reading the first MPEG data from the first recording medium;

        an information obtaining process for obtaining positional information which indicating positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

        an information addition process for adding the positional information at a determined position in the first MPEG data, to generate second MPEG data; and

        a recording process for recording the second MPEG data on a second recording medium, wherein in the reading process, the first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed, and

wherein in the recording process, the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

29-30. **(Cancelled)**

31. **(Currently Amended)** A personal computer which has a memory unit for holding MPEG data that is obtained by coding a video signal by an MPEG coding system and is divided taking a given data unit as one data group, and implements a data processing for recording/reproducing the MPEG data by executing software stored on a computer-readable medium, wherein

    said data processing includes:

        a storage process for storing first MPEG data corresponding to one or more data groups in a memory unit;

a reading process for reading the first MPEG data from the memory unit;

an information obtaining process for obtaining positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

an information addition process for adding the positional information at a determined position in the first MPEG data, to generate second MPEG data; and

a recording process for recording the second MPEG data on a second recording medium,  
wherein in the reading process, the first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed, and  
wherein in the recording process, the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

32. **(Currently Amended)** A recording/reproduction program embodied on a computer-readable medium for implementing a recording/reproduction process, by a computer, for reading data from a first recording medium containing first MPEG data which is divided taking a given data unit as one data group and recording/reproducing the read data, wherein  
said recording/reproduction process includes:

a reading step of reading the first MPEG data from the first recording medium;

an information obtaining step of obtaining positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

an information addition step of adding the positional information at a determined position in the first MPEG data, to generate second MPEG data; and

a recording step of recording the second MPEG data on a second recording medium,  
wherein in the reading step, the first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed, and

wherein in the recording step, the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

33-34. (Cancelled)

35. (Currently Amended) A recording/reproduction program embodied on a computer-readable medium for implementing a recording/reproduction process, by a computer, for recording/reproducing MPEG data which is obtained by coding a video signal by an MPEG coding system and is divided taking a given data unit as one data group, wherein

said recording/reproduction process includes:

a storage step of storing first MPEG data corresponding to one or more data groups in a data storage unit;

a reading step of reading the first MPEG data from the data storage unit;

an information obtaining step of obtaining positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

an information addition step of adding the positional information at a determined position in the first MPEG data, to generate second MPEG data; and

a recording step of recording the second MPEG data on a second recording medium,

wherein in the reading step, the first MPEG data is read at a speed which is higher than a real time reproduction speed at which the first MPEG data is normally decoded and displayed,  
and

wherein in the recording step, the second MPEG data is written on the second recording medium at a speed which is higher than a real time reproduction speed at which the second MPEG data is normally decoded and displayed.

36-39. (Cancelled)

40. **(Currently Amended)** The recording/reproduction method of Claim 12, wherein in the information addition step, the positional information indicating the positions of the previous and subsequent data groups of the specific data group with respect to said specific data group is added in the vicinity of the head of said specific data group.

41-47. **(Cancelled)**

48. **(Currently Amended)** The recording/reproduction method of Claim 12, wherein the MPEG data is coded data which conforms to any of MPEG1, MPEG2, MPEG4, and MPEG7 standards.

49-50. **(Cancelled)**

51. **(Currently Amended)** The recording/reproduction method of Claim 12, wherein the first and second MPEG data are transport streams or program streams.

52-53. **(Cancelled)**

54. **(Currently Amended)** The recording/reproduction method of Claim 12, wherein the data group is composed of one or plural GOPs each being an access unit at reproduction.

55-56. **(Cancelled)**

57. **(Currently Amended)** The recording/reproduction method of Claim 12, wherein the first and second recording media are any of a hard disk, an optical disk, a magneto-optical disk, a semiconductor memory, and a magnetic tape.

58-60. **(Cancelled)**

61. (New) A recording/reproduction method by which MPEG data that is obtained by coding a video signal by an MPEG coding system and is divided taking a given data unit as one data group is recorded/reproduced, said recording/reproduction method comprising:

a storage step of storing first MPEG data corresponding to one or more data groups in a data storage unit;

a reading step of reading the first MPEG data from the data storage unit;

an information obtaining step of obtaining positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to the specific data group, on the basis of the first MPEG data;

an information addition step of adding the positional information at a predetermined position in the first MPEG data, to generate second MPEG data; and

a recording step of recording the second MPEG data on a second recording medium, wherein said storage step and said reading step are executed alternately and approximately at the same, and

wherein said storage step, said reading step, said information obtaining step, said information addition step, and said recording step are executed in near real-time.

62. (New) The recording/reproduction method of Claim 61, further comprising:

a coding step of coding a video signal by an MPEG coding system to create video data and simultaneously coding an audio signal to create audio data;

a multiplexing step of multiplexing the audio data and the video data to generate the first MPEG data; and

a preprocessing recording step of recording the first MPEG data on the first recording medium.

63. (New) The recording/reproduction method of Claim 61, wherein

in the information addition step, the positional information indicating the positions of the previous and subsequent data groups of the specific data group with respect to said specific data group is added in the vicinity of the head of said specific data group.

64. (New) The recording/reproduction method of Claim 61, wherein the MPEG data is coded data which conforms to any of MPEG1, MPEG2, MPEG4, and MPEG7 standards.

65. (New) The recording/reproduction method of Claim 61, wherein the first and second MPEG data are transport streams or program streams.

66. (New) The recording/reproduction method of Claim 61, wherein the data group is composed of one or plural GOPs each being an access unit at reproduction.

67. (New) The recording/reproduction method of Claim 61, wherein the first and second recording media are any of a hard disk, an optical disk, a magneto-optical disk, a semiconductor memory, and a magnetic tape.

68. (New) A recording/reproduction apparatus which records/reproduces MPEG data that is obtained by coding a video signal by an MPEG coding system, said recording/reproduction apparatus comprising:

    a memory unit for storing first MPEG data corresponding to one or more data groups;  
    a reading unit for reading the first MPEG data from the memory unit;  
    an information obtaining unit for obtaining positional information which indicates positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

    an information addition unit for adding the positional information at a predetermined position in the first MPEG data, to generate second MPEG data; and

    a recording unit for recording the second MPEG data on a second recording medium, wherein said memory unit and said reading unit store and read the first MPEG data alternately and approximately at the same time, and

wherein said storing by the memory unit, said reading by the information obtaining unit, said obtaining by the information obtaining unit, said adding by the information addition unit, and said recording by the recording unit are executed in near real-time.

69. (New) A personal computer which has a memory unit for holding MPEG data that is obtained by coding a video signal by an MPEG coding system and is divided taking a given data unit as one data group, and implements a data processing for recording/reproducing the MPEG data by software embodied on a computer-readable medium, wherein said data processing includes:

a storage process for storing first MPEG data corresponding to one or more data groups in a memory unit;

a reading process for reading the first MPEG data from the memory unit;

an information obtaining process for obtaining positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

an information addition process for adding the positional information at a predetermined position in the first MPEG data, to generate second MPEG data; and

a recording process for recording the second MPEG data on a second recording medium, wherein said storage process and said reading process are executed alternately and approximately at the same, and

wherein said storage process, said reading process, said information obtaining process, said information addition process, and said recording process are executed in near real-time.

70. (New) A recording medium having a program stored thereon for implementing a recording/reproduction process, by a computer, for recording/reproducing MPEG data which is obtained by coding a video signal by an MPEG coding system and is divided taking a given data unit as one data group, wherein said program causes the computer to execute a method comprising:

a storage step of storing first MPEG data corresponding to one or more data groups in a

data storage unit;

    a reading step of reading the first MPEG data from the data storage unit;

    an information obtaining step of obtaining positional information which indicates positions of previous and subsequent data groups of a specific data group in the read first MPEG data with respect to said specific data group, on the basis of the first MPEG data;

    an information addition step of adding the positional information at a predetermined position in the first MPEG data, to generate second MPEG data; and

    a recording step of recording the second MPEG data on a second recording medium, wherein said storage step and said reading step are executed alternately and approximately at the same, and

    wherein said storage step, said reading step, said information obtaining step, said information addition step, and said recording step are executed in near real-time.